

REMARKS

Claims 1, 2, 14, 25, and 36 have been amended, while new claims 38 and 39 have been added. Claims 1-4, 6-15, 17-26, and 28-39 remain pending.

The Examiner rejected claims 1-37 under 35 U.S.C. §102(e) as being anticipated by Crump et al. (U.S. 6,892,245). The Examiner's rejections are respectfully traversed as follows.

Claim 1 is directed towards a "method for performing network address translation on data." Claim 1 also recites "receiving a first data having a first source address and a first destination address, wherein the first data is sent by a first node in a first domain to a second node in a second domain, and wherein the first data is received into a first interface associated with the first domain and output from a second interface associated with the second domain, and wherein the first domain differs from the second domain." Claim 1 further requires "if the first source address is a private address and if a binding between the first source address, the first interface, and a first public address is found, translating the first source address into the first public address specified by the found binding prior to sending the first data to the second domain destination." That is, a private first source address is translated based on whether a binding between this private source address and the first interface (and a public address) is found.

If a binding is not found between this private address and this first interface, a new binding is formed: "if the first source address is a private address and if a binding between the first source address, the first interface, and a first public address is not found, translating the first source address into a selected public address and forming and storing a first binding between the first source address, the selected public address, and the first interface, wherein the translation is performed prior to sending the first data to the second domain destination." For example, if a binding is found for a same private address and a different interface than the received first data, this binding is not used for translation of the first data's source address and, instead, another selected public address is used for the translation and another binding is formed. Once a binding is formed for a private, source address of a particular host, this binding is used for all other data sent to and from this particular host regardless of the other host's domain. This mechanism will prevent the same translation being used for different nodes in different private domains that happen to have a same private address while efficiently utilizing a single global address for each local address and its interface.

The remaining independent claims include mechanisms for performing the same operations as claim 1.

Although Crump teaches performing translation between different domains, Crump fails to teach mechanisms for translating data based on a binding between private and public addresses *and the interface of the received data*, in the manner claimed. Crump teaches translating data from a particular source address and domain into different global addresses that are specific to the *destination* domains. See Col. 3, Lines 32-36. Thus, each local address is translated into multiple global addresses for the different destination domains. See Translations Tables of Figure 2A, for example, where local address A maps to three different global addresses for three different destination domains.

In embodiments of the present invention, a binding is formed for each local address and its particular interface and selected global address, and this binding is then used to uniquely identify the local node across all other domains (private and public). In sum, a binding is formed for each local address, public address, and interface for the local host, and then this binding is used for all subsequently received data transmitted to and from such local host.

In Crumb, when a binding is formed for a particular local address and its global address, this binding is not used for data going between the same local host and a different destination domain. Instead, another binding is formed for the same local host and different destination domain. Accordingly, Crumb fails to teach or suggest such a mechanism for forming and utilizing a binding between a local address of a local host, public address and the local host's interface for data going to and from such local host, in the manner claimed. Accordingly, it is respectfully submitted that independent claims 1, 14, 25, and 36 are patentable over the cited references.

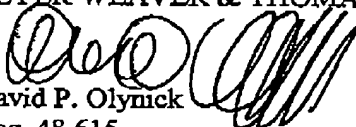
The Examiner's rejections of the dependent claims are also respectfully traversed. However, to expedite prosecution, all of these claims will not be argued separately. Claims 2-4, 6-13, 15, 17-24, 26, 28-35, and 37 each depend directly or indirectly from independent claims 1, 14, 25, or 36 and, therefore, are respectfully submitted to be patentable over cited art for at least the reasons set forth above with respect to claims 1, 14, 25, or 36. Further, the dependent claims require additional elements that when considered in context of the claimed inventions further patentably distinguish the invention from the cited art.

For example, claim 2 specifies operations for handling a second data having a private, source address that is the same as the private, source address of the first data, but the second data is being sent to a third domain that differs from the first data's first domain. Claim 2 recites "the third domain differs from the first domain but the second source address is the same as the first source address" and "if the second source address is a private address and if a binding between the second source address, the third interface, and a second public address is not found,

translating the second source address into a second public address and forming and storing a second binding between the second source address, the second public address, and the third interface, wherein the translation is performed prior to sending the second data from the fourth domain interface." If this binding between "the second source address, the third interface, and the second public address" is found, claim 2 recites that "translating the second source address into the second public address specified by the found binding prior to sending the second data to the third domain destination." If the destination address alternatively matches up with this already existing binding (data is being transmitted to the third node), the destination address is also translated based on this same binding: "if a second destination binding between the second destination address, a second private address, and the fourth interface is found, translating the second destination address into the second private address specified by the second destination binding, wherein the translation of the second destination address is performed prior to sending the second data out the fourth interface to the fourth node." New claims 38 and 39 provide mechanisms for performing such operations. Thus, any data going to and from the same private node is translated based on this same binding which matches up with the interface of the private node, even when the other nodes have different domains. Crump fails to teach or suggest a mechanism for forming and using such a binding for translation, in the manner claimed.

Applicant believes that all pending claims are allowable and respectfully requests a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

Respectfully submitted,
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